Georgia Space Grant Consortium
2025 Annual Report

GEORGIA Space Grant Consortium

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NASA Partner

BY THE NUMBERS

Direct participation by Georgia students, educators and the community in GSGC programs during the 2024-2025 academic year:

14,470 K-12 Students

490 K-12 Educators

2,431 Undergraduate Students

116 Graduate Students

16 Post Doctoral Students

110 Higher Education Faculty

80 Fellowships, Scholarships, & Internships Awarded

1,363 Georgians Engaged via Community Events

19,076

Georgia Residents Impacted

A list of all currently funded GSGC Programs can be found on the Georgia Space Grant website by scanning the QR code.

A Program Sponsored through: National Space Grant College and Fellowship Program - Opportunities in NASA STEM FY 2020 – 2025 Cooperative Agreement NASA Announcement Number: 80NSSC20M0094

GSGC Membership

The Georgia Space Grant Consortium (GSGC) was established in 1989 to develop a statewide network of academic, industry, and non-profit partners dedicated to maximize the number of Georgia students from all backgrounds who are well-prepared in science, technology, engineering, and mathematics (STEM) fields and who are motivated to support space and aeronautics programs vital to this nation.

GSGC is a NASA program and part of the National Space Grant College and Fellowship Program. GSGC has 21 affiliate members and 5 partner organizations serving both metropolitan and rural areas of the state.

Affiliates:

- Agnes Scott College
- Albany State University
- Clark Atlanta University
- Columbus State University
- Georgia Institute of Technology
- GA Southern Univ.-Armstrong
- GA Southern Univ.-Statesboro
- Georgia State University
- Hines Family Foundation
- Kennesaw State University
- Mercer University
- Morehouse College
- Museum of Aviation
- PinkSTEM
- Savannah State University
- SpaceWorks Enterprises, Inc.
- Spelman College
- University of Georgia- Athens
- University of Georgia- Griffin
- University of North Georgia
- University of West Georgia

Partners:

- Center for Sustainable Communities
- Commodore Conyers College and Career Academy
- Space Research Insitiute at Georgia Tech (SRI)
- Georgia Center for Innovation for Aerospace
- West Georgia Technical College

GSGC Leadership

Stephen Ruffin, PhD
Director

Lori Skillings
Program Manager

Kelly Griendling, PhD
Outreach Lead

Alysia Watson
Program Coordinator

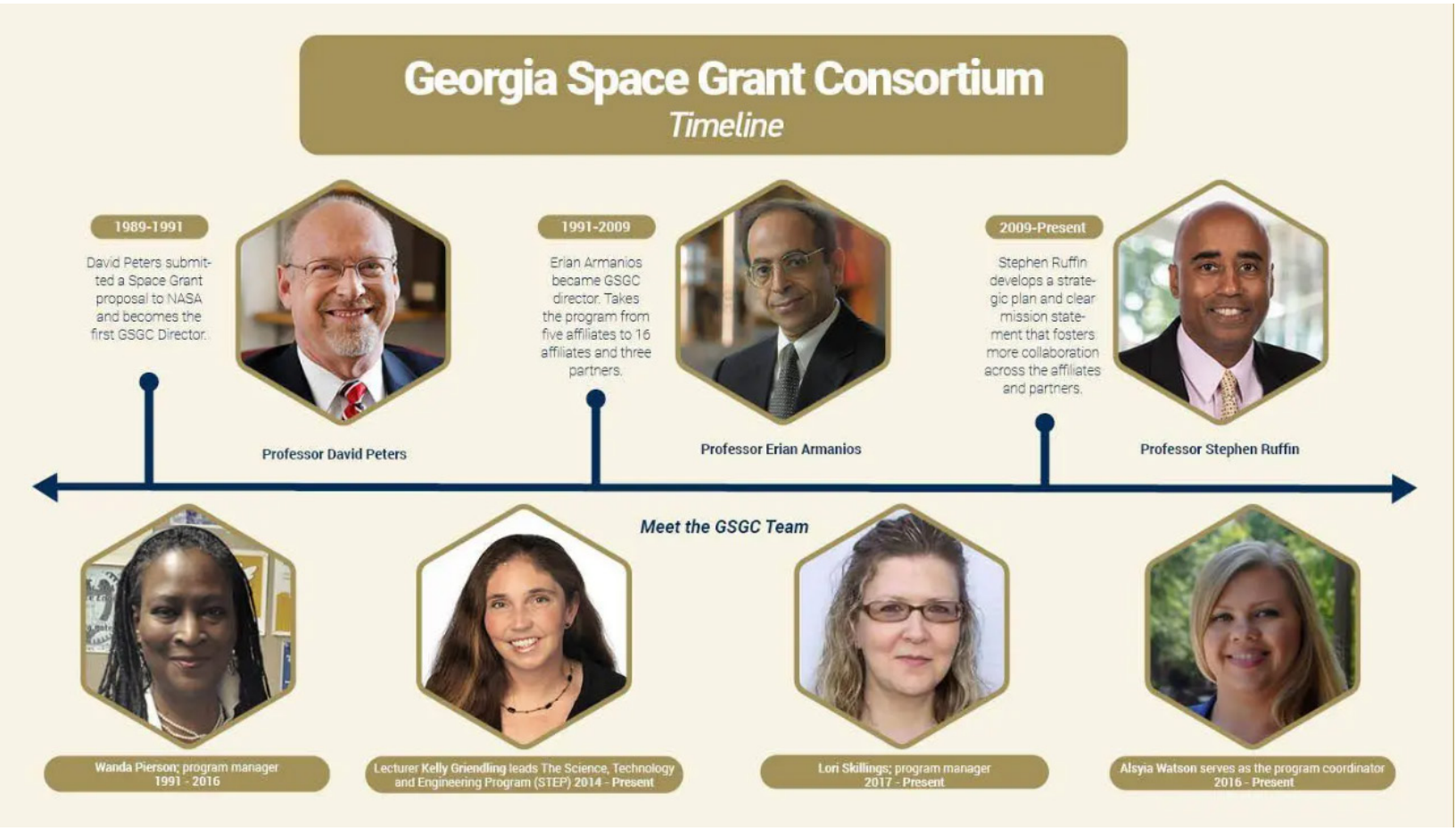
35 Years of Space Grant
A Beacon of Light to the State

Monique Waddell

Space has long served as a powerful gateway for sparking curiosity and igniting passion in science, technology, engineering, and mathematics (STEM). Globally, STEM fields are in high demand. In Georgia, aerospace is the state's top export — a thriving landscape that underscores the importance of cultivating a robust STEM pipeline. Georgia Tech has played a central role in fueling that pipeline through the Georgia Space Grant Consortium (GSGC)Georgia Space Grant Consortium (GSGC)

Since 1989, Georgia Tech has successfully managed GSGC, a statewide network of higher education institutions, nonprofits, strategic industry allies, and partners who develop and administer STEM programs. Established in 1988 by Congress and implemented by NASA, GSGC has grown into a powerful source for STEM innovation and opportunity.

Each year, GSGC receives federal funding to support a wide range of programs, including fellowships and scholarships for college students, research initiatives, internships, hands-on STEM activities for K-12 students, professional development for educators, and workforce development programs.
Initially, there were only four affiliate institutions: Clark Atlanta University, Georgia State University, Tuskegee University, and Kennesaw State University. Today, that number has grown to more than 21 affiliate institutions and an additional six partner organizations. Affiliates are elected to membership and actively advance the program's mission through the financial support of GSGC.



Full article available here

Around the State

GSGC funds its affiliate institutions and partners across Georgia to carry out the program mission. Affiliate directors bring their ideas to the table to serve their communities in both rural and urban areas of the state. Orchestrating collaboration with affiliate institutions and partners has been crucial to the consortium's growth and longevity.

"Working with GSGC has allowed me to open doors to fields students may never have explored before," said AE graduate student Erik Goeke. In addition to mentoring students, Goeke accompanied the GSGC staff to Capitol Hill to promote the program while also working on NASA's ML-Bots, a Georgia Tech created program focused on machine learning missions.

At Georgia Tech, the STEP Summer Camp brings over 50 high school students to campus to learn engineering design and complete a NASA-inspired project in two weeks. The program started 10 years ago with 20 students and now has almost 60; this year, under Griendling's leadership, STEP received more than 500 applications. They bring space to life for Georgia high school students.

At Athens, University of Georgia graduate student Matthew Olson worked on a project to develop and test a compact thermal vacuum chamber, using thermoelectric coolers for CubeSat environmental testing.

Meanwhile, at the Griffin campus, a program developed CyanoSense 2.0 — a satellite-connected sensor system designed to detect the location and size of harmful algal blooms using space-based communication. CyanoSense 2.0 has been deployed at six locations across the country.

Mercer University collaborated with the Warner Robins Air Force Base–STARBASE program, the Georgia Association of Conservation Districts, and the Hines Family Foundation to create a summer camp for middle school kids that introduces students to climate science and agriculture.

Farther south, Georgia Southern University hosts the Eagle Engineering Ambassadors program. There, students mentor local high school students and teachers each semester through various engineering projects like design prototyping using CAD, 3D printing, Arduino programming, and autonomous robots.

"I've worked with GSGC since my first year, as an undergraduate student," said graduate student Jalen Caluey, AE 2025, "I've done logistical and technical work in STEP. I've mentored K-12 students, but I also learned more technical skills while doing so."

GSGC also offers activities for the public throughout the year, including presentations at the University of West Georgia's Planetarium, STEM Summer Camps at the Museum of Aviation next to Robins Air Force Base in Warner Robins and solar system walks at Georgia Southern University and the University of North Georgia.

With aerospace being the state of Georgia's No. 1 export, the consortium helps to cultivate Georgia's next generation of skilled STEM professionals.

Agnes Scott College Student Profile:
Makaila Jennings, Undergraduate

I volunteer at the Bradley Observatory and currently serve as its K-12 Education Outreach Coordinator. I got the opportunity to start giving tours to K-12 students at the beginning of my Freshman year. I learned how to operate the planetarium and the other stations for our observatory tours.

It was very fun to teach students about space and our solar system, and I saw how important it is for young children to learn about science. In the spring semester of my Freshman year, I became the K-12 Education Outreach Coordinator and was in charge not only of giving tours but also of finding and training volunteers for them.

I have continued to serve in this position into my Sophomore year. Volunteering at the Bradley Observatory and serving as the K-12 Education Outreach Coordinator has helped me in many ways. First, it has helped me learn how to explain science topics to audiences with various backgrounds.

The observatory tours have a variety of age groups, from kindergarteners to college students, and I have had to learn how to convey the information in ways that each group can understand and be engaged.

I plan to pursue a PhD in Astrophysics, studying exoplanets and determining whether any are potentially habitable. As I progress in my career, I will need to explain research and projects to different groups, and being able to tailor my presentations in an engaging, understandable way is very important. Working at the Bradley Observatory has given me experience in a leadership role.

As the K-12 Education Outreach Coordinator, I have to direct other students to ensure the tours run smoothly. I make sure each tour guide has the information they need to communicate with the school group leaders, understand what the schools want from the tours, and determine whether we can provide it.

When I train tour guides, I have to ensure they learn the skills needed to give tours and are comfortable guiding school groups. After pursuing my higher degree, I plan to work at an academic institution or organization, such as NASA or the SETI Institute. Whichever route I end up in, I will at some point need to be in a leadership position, and working at the Bradley Observatory has allowed me to learn how to be a leader and work in a leadership opportunity.

photo courtesy of Georgia State University

AsTropaLooza Hands-On Engagement activity

Community Engagement activities at the 2025 GSGC collaborative engagement activity AsTropaLooza.

Science, Technology, and Engineering Program (STEP)

Georgia high school student working on their team's rover during the 2025 STEP Summer Program at Georgia Tech School of Aerospace.

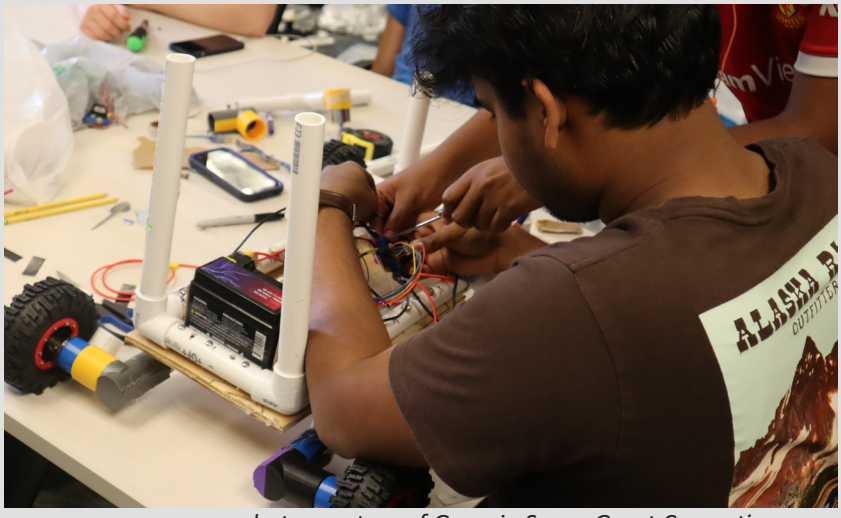


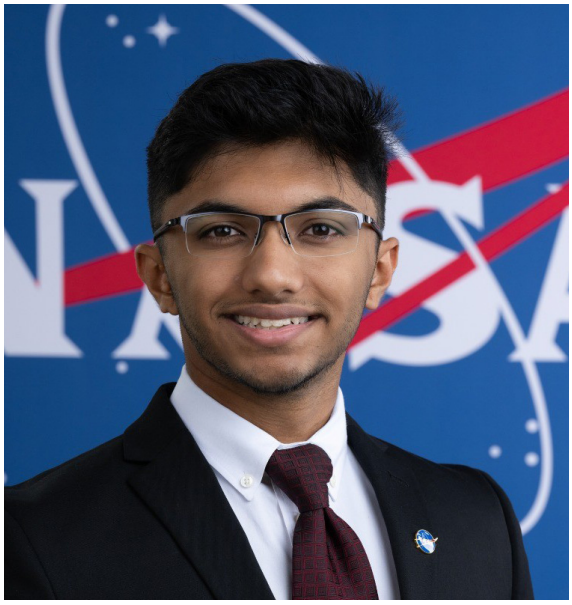
photo courtesy of Georgia Space Grant Consortium

photo courtesy of the University of Georgia, Griffin

Applications of Airborne Observations in Crops

Kriti Poudel, University of Georgia Graduate student, was operating to fly the drone and take multispectral images.

Georgia Institute of Technology Student Profile:
Parth Garud, Undergraduate



My involvement with the Georgia Space Grant Consortium began as a participant in the STEP high school outreach program between eleventh and twelfth grade. At the time, I knew I wanted to go into some type of engineering field but didn't have much clarity beyond that regarding my career.

The STEP program seemed like a way to get more exposure into the aerospace field, and taking part in it that summer significantly impacted my educational trajectory. During the two-week program, I was able to get hands on experience building a rover, working with limited resources, and finding creative solutions to the engineering challenges I faced. I left the program with a newfound deep interest in the field and applied to Georgia Tech with the intended major of Aerospace Engineering. Following high school, I was able to use the skills I had gained through STEP to land an internship with the Air Force Research Laboratory. Additionally, the connections I made with GT students working the program were very helpful when it came to getting advice on registering for classes and making several professional decisions. During my undergrad, I volunteered as a mentor for the program full time for a summer and made it a point to come help out when I was in town for several other summers.

When I got to Tech, I quickly became involved with the Georgia Tech Experimental Rocketry (GTXR) student team. I was able to apply problem solving skills I learned through STEP and AFRL to help build a two-stage sounding rocket with the team. While the design and build process was incredibly valuable, I think attending my first launch with GTXR was the moment I knew that I had made the right choice in choosing my field of study. I was able to travel across the country and have this amazing experience because of GSGC, and over the last several years I have been fortunate to see so many younger members on the team have that same moment I had due to the continued support of the Space Grant. When I became a lead on GTXR, one of my goals was to expand the outreach efforts of the team and bring the opportunity to work on these amazing projects to local high schools. As part of this initiative, I started the GTXR high school internship program. In the first year of the program, I mentored an interested high school senior as a trial to see if the club could support providing these internships and if they would be impactful for the students selected. The first year was very successful, with the high school student deciding to study aerospace engineering and becoming very involved with the team and AE department once he started at Tech. This program has been supported by GSGC since its inception, and since its founding has provided internships to over 15 students!

The leadership experience I personally gained from mentoring the program was tremendously beneficial to becoming a better mentee myself when I went to intern at companies such as Firefly, NASA, Spaceworks, and SpaceX. Through GSGC, I have also had the privilege to conduct undergraduate and graduate research on the GT MLBots project. My work consisted of the technical aspect ofdeveloping machine learning and computer vision algorithms to enable the robots to do tasks, but also the pedagogical task of finding the best ways to deliver the material as digestible modules for high schools in the greater Atlanta area. This research made it possible for me to work towards my master's degree in aerospace engineering, something which I am hopeful will open professional doors for me in the future. All in all, I amextremely grateful to the Space Grant for providing me with opportunities, resources, and guidance over the past five and a half years. I was lucky to have the chance to participate in a GSGC program while in high school and have found immense fulfillment in being able to pay it forward for the next generation of engineers while I was in college.

Albany State University Student Profile:
Tre'von Baker, Undergraduate

My name is Tre'von Baker. I'm a current sophomore. My major is mechanical engineering and Albany State University. I am from Atlanta Georgia and I am excited to tell you what I experience during this scholarship.

My first encounter with GSGC came through a faculty advisor who encouraged me to apply for one of their undergraduate research opportunities. I still remember the uncertainty I felt submitting that application. I wasn't sure if I was qualified, or whether my interest alone was enough. When the acceptance email arrived, it felt like a door had opened into a world I had only observed from afar. GSGC did more than give me a project it gave me my first genuine foothold in the aerospace community.

During my time in the program, I worked closely with mentors who treated me not as a student completing an assignment but as a developing researcher with ideas worth nurturing. My project was focused on designing artificial materials with circular metal patches printed periodically on a dielectric substrate. Through working in this project I learned the operation of a simulation software called HFSS. I learned how to think critically, how to navigate ambiguity, and how to communicate complex ideas with clarity. I discovered the exhilaration of pursuing questions no one had fully answered before, and the responsibility that comes with contributing to meaningful scientific work.

Equally transformative were the professional development experiences that accompanied the research itself. Through GSGC workshops, conferences, and networking events, I was introduced to a diverse community of scientists, engineers, educators, and industry professionals.
These interactions broadened my sense of what was possible. Suddenly, a career in aerospace was no longer a distant dream it was a landscape with clear pathways, mentors, and opportunities. Hearing the journeys of those further along in the field gave me both motivation and a realistic understanding of the challenges ahead.

GSGC also reshaped my identity as a learner. Instead of seeing education as a series of disconnected classes, I began viewing it as a cohesive toolkit I could apply to problems that mattered. This mindset shift influenced every academic decision I made afterward, from the courses I sought out to the projects I pursued. It ultimately played a major role in guiding me toward my current academic and professional trajectory, one grounded in research, innovation, and a commitment to contributing to the aerospace community.

Perhaps the most lasting impact of the GSGC program was the confidence it instilled in me. GSGC validated not only my interest in space but my ability to thrive in a field driven by curiosity, precision, and collaboration. It marked the beginning of my journey from an aspiring student to an emerging professional, and I carry its influence with me in every step I take toward my future in science and engineering.

AsTropaLooza

Astronomy Outreach at the Bradley Onservatory's AsTropaLooza Event at Agnes Scott Colllege.

photo courtesy of Agnes Scott College

photo courtesy of the ML- Bots team

Applications of Airborne Observations in Crops

Middle School Students working on the collaborative NASA's Space Grant KIDS, ML-Bots Program.

Georgia Institute of Technology Student Profile:
Karina Shah, Undergraduate

My name is Karina Shah, and I am an undergraduate student at the Georgia Institute of Technology pursuing a degree in aerospace engineering. My passion for engineering formed at the early age of 4, shaped by my family who are all deeply rooted in science, medicine, and innovation. I grew up in an environment that encouraged curiosity, problem-solving, and creative thinking. My mother, who studied microbiology, played a crucial role in shaping my love for mathematics and science. My father, a businessman, emphasized leadership and resilience and actively encouraged my involvement in robotics. My sister, a doctor, further reinforced the value of service and using knowledge to improve people's lives. Growing up in a household that blended scientific study, medical science, and entrepreneurship taught me to approach engineering with both technical rigor and a focus on practical impact.

Since coming to Georgia Tech, I have immersed myself in aerospace engineering and discovered a strong passion for flight, robotics, and autonomous systems. This interest came into focus through my involvement with programs supported by the Georgia Space Grant Consortium (GSGC), which has been instrumental in shaping my professional direction. During the summer following my freshman year, I served as a drone mentor for the high school students in Albany, Georgia through the STEP grant. Over the course of two weeks, I guided students through the design, assembly, and testing of drones and mechanical systems that were designed to support communities during natural disasters. Through this experience, I strengthened my technical understanding of unmanned aerial systems and gained valuable experience in leadership.

Mentoring students in a project with real-world impact reinforced my appreciation for engineering as a tool for community impact. Following that summer, I joined Georgia Tech Machine Learning Bots Research group under the Georgia Space Grant Consortium. In my first semester, I gained hands-on experience training machine-learning bots and participated in outreach efforts at local schools. Helping younger students learn how to train bots and witness their excitement and curiosity reinforced my passion for mentorship and STEM education. Within the research group, I also contributed to development of a remote-controlled car and autonomous rover designed to navigate across campus.

These projects allowed me to work with tools such as soldering irons, electrical systems, and embedded hardware, further improving my technical skill set and confidence as an engineer. The Georgia Space Grant Consortium has played a crucial role in my academic and professional growth. Through GSGC-supported programs, I have expanded my technical skill set, engaged in meaningful research, and discovered the importance of mentorship and outreach in STEM. These experiences have allowed me to inspire curiosity and confidence in younger students mirroring the encouragement I received when growing up. As I continue studying aerospace engineering, I aspire to advance autonomous systems while fostering opportunities for the next generation of engineers

West Georgia Technical College Student Profile:
Andrew Simonenko, Undergraduate

When I began my first semester at West Georgia Technical College last fall, I wasn't sure what my future in academics or the workforce would look like. I was at a turning point in my life and didn't know what I wanted to do, until this internship opportunity arose over the summer. From learning electrical concepts and practices in the classroom, then putting them to use in a real-world setting, this internship has shaped both my academic and professional trajectory in a way that I thought was not possible otherwise.

Over the summer, I was notified about an internship opportunity at Tyden Brooks. Since I was approaching my final semester, I knew I had to apply for it. I figured it would be a great way to get my foot in the door and gain valuable knowledge and skills leading up to my final semester in the Electrical Systems program. After securing an interview, I was told that I was selected for the internship. I was excited and eager to see what the industrial aspect of electrical work looked like on a day-to-day basis.

During the internship, I worked with electricians, mechanics, and several engineers learning all the different aspects of the plant. My days consisted of troubleshooting circuits, responding to mechanical failures in equipment, and even getting a glimpse of how robots are programmed. This is when my interest peaked in the engineering side of things. I not only wanted to know how things worked, but why they worked as well. While working with the engineers, they all seemed passionate about what they did and were excited to elaborate on all the questions I had. After seeing what the engineers did daily and how invested they were in their work, it really made me start to consider a future in engineering.

After the internship ended, I was excited about all the knowledge I had gained but I was in a predicament. Although I was able to get my foot in the door, I was finishing my program in December and didn't have a job in the field. About two weeks after the internship ended, I got a call from Tyden Brooks, and they offered me a full-time position as an electrical apprentice. I was ecstatic; I had a job in my field, was still learning every day, and didn't have to stress about finding a new job in December.

Overall, this internship opportunity has helped me tremendously in every aspect of my life. Since August, I have been at Tyden Brooks working as an electrical apprentice. Also, every Friday I spend the day with engineers learning, designing, and creating new concepts to boost production in the plant. This is what led me to further pursue my academic and professional future in engineering. Seeing how engineers create something from nothing and solve complex problems really piqued my interest and made me want to become one. Starting next semester, I will begin taking classes in the electrical engineering program at my school with the goal of becoming an engineer in the future. If it were not for this internship opportunity, I believe I would have stayed an electrician instead of pursing an academic and professional future in engineering.

Charu Bigamudra Student Profile:
GTXR High School Intern

During the academic year of 2024-2025, I worked as a structures intern at Georgia Tech Experimental Rocketry (GTXR) on the mechanical subsystem. My involvement with GTXR has been the most defining point of my academic life, as I have had the opportunity to connect the theoretical knowledge I gained from academic sessions to the actual production of aerospace products while being part of an interdisciplinary group that is passionate about launching superior-class rockets.

As a structures subteam member, my work focused on precision machining, fixture development, composite fabrication, and integration of subsystems. I acquired ample skills in using CAD solutions such as Onshape to create parametric parts and tooling/fixture designs specifically to accommodate manufacturing needs. One of my main projects included designing and fabricating custom softjaw fixtures to enhance the machining precision and repeatability of parts dealing with rail guide machining. The two designs worked in a collaborative manner with machinists to minimize human error and improve manufacturing in the future.

Additionally, I worked on the charge well mounting system, machining flats for clamping, making inserts for bonding with epoxy, and designing holders that would facilitate the safe and accurate mounting of energetic components. Other projects that I worked on include designing a nose cone holder that would shield the airframe surface during handling, helping with the fitting of avionics interface plates, and helping with bulkhead modifications.

One of the highlights of this internship is that I got to experience the fabrication of composite components, specifically involving the carbon fiber sandwich lay-up process for the fin cores. I got to experience hands-on activities involving nosebay packing, which ensured thorough resin wet-out, as well as vacuum and component checks, just prior to nose and nosebay preparation for flight.

Other than manufacturing, I also participated in efforts associated with cooperation and readiness for launch. I attended hardware integration meetings, helped with packaging and labeling of flight hardware, and also cooperated in the final surface finishing operations, such as sanding critical aerostructures. Through collaborations involving the structures, avionics, and propulsion groups, I realized the value of communication, documentation, and detail in engineering projects.

GTXR has been pivotal to my confidence and sense of engineering identity. The experience of working on actual hardware and real-world engineering expertise further honed my engineering capabilities in addition to instilling the value of safety and collaboration. The Georgia Space Grant Consortium was instrumental in my having this internship experience. Without such opportunities, the level of engagement of high school and undergraduates alike from their respective institutions for GTXR's annual launch would not have been possible. The memory of my engagement with GTXR has only reinforced my engineering interest in mechanical and aerospace engineering.

Hands-On LIVE! On-Site Field Trips

Elementary School Students at a Museum of Avaiation's LIVE! On-Site Field Trip at the Museum of Aviation in Warner Robins Georgia.

photo courtesy of the Museum of Aviation

photo courtesy of Columbus State University

Hands-On Observing and Research Program

Fellowship Reciepents from Columbus State University's Hands-On Observing and Research Program.

University of North Georgia Student Profile:
Rowan Ponelis, Undergraduate

My involvement with the Georgia Space Grant Consortium (GSGC) has been one of the most formative experiences in my academic and professional development. When I first joined the program, I was an undergraduate student at the University of North Georgia (UNG) with an interest in engineering but without a clearly defined path toward the aerospace field. But the NASA Space Grant Fellowship changed that outlook. It provided not only funding, but strong mentoring connections to the physics department at UNG and helped build confidence and focus my ambitions into a tangible engineering trajectory.

Through the help of the NASA Space Grant Fellowship program, I worked closely on a student-led research project under our engineering department professor, Dr. Mallett. I was able to explore advanced mechanical systems and motion optimization of a bio-inspired leg mechanism. Supported by GSGC resources, I was able to take simulations from code and validate my ideas through prototyping with 3D printed materials and circuitry. This was the first time I experienced the engineering design process: conceptualizing a question, constructing a tool to answer it, and then communicating those results .

More importantly, the GSGC immersed me in a research ecosystem shaped by NASA's mission values. I learned to organize my time wisely between classes, research, and personal life, as well as apply the tools learned in math and physics classes. These experiences directly contributed to the additional research honors I later received, including UNG's CURCA Research Grant and continued STEM research awards.

Additionally, the GSGC reshaped my professional direction. Participation in the program sparked a greater ambition in not only the aerospace field, but in specific goals like transferring to Georgia Tech and building professional aerospace related connections. Through relations fostered with the physics department at UNG, it made me aware of opportunities such as the Southwest PIN program. In Summer 2025 under a UNG-specific AI in Manufacturing group, I interned at Siemens. This crucial experience reinforced my career related skills, obtaining key experiences in manufacturing, coding, and collaborating in the real world.

But more importantly than that, the internship opportunity opened many doors in my life. The direct impact from the GSGC Space Grant Fellowship program led me to not only the PIN program, but also allowed me to achieve my dream of transferring to Georgia Tech as an aerospace engineer. The impact is ongoing, as I'm also looking forward to participating in an aerospace related internship at Spirit Aerosystems in Summer 2026. The GSGC program sparked a larger ambition to push myself forward and achieve dreams of real-world collaboration, and will continue to do so.

The Georgia Space Grant Consortium did more than support a project—it shifted my confidence and trajectory as an engineer, and opened professional doors that continue to shape my long-term goals. It taught me to pursue challenges boldly, think as both a researcher and a builder, and ultimately commit myself to contributing real innovation to the aerospace community.

Kennesaw State University Student Profile:
Ari Schwartz, Undergraduate

My name is Ari J. Schwartz, and I am an undergraduate student at Kennesaw State University majoring in Biology. Through the Georgia Space Grant Consortium (GSGC), I have had the privilege of engaging in meaningful research and outreach that have shaped both my academic trajectory and passion for science.

One of the most rewarding aspects of my GSGC experience has been contributing to K–12 STEM enrichment. I designed and led interactive biotechnology workshops for high school students with limited STEM exposure, incorporating simplified experiments on bacterial transformation and hands-on demonstrations to make complex biological concepts accessible.

Seeing students grow curious and confident as they perform lab activities reaffirmed my commitment to advancing STEM literacy and inspiring the next generation of scientists. Building upon this foundation, GSGC funding supported my independent research under the mentorship of Dr. Premila Achar, Associate Professor of Biotechnology.

My work focused on evaluating clove oil as a natural antifungal agent to inhibit Aspergillus flavus and reduce carcinogenic aflatoxin B1 production in Georgia peanuts. This pursuit promotes agricultural sustainability and improves public health. My research culminated in my role as the primary author of a peer-reviewed article published in the American Chemical Society's Omega Journal in October 2025.

Over the course of two years, I also presented my findings at four major scientific conferences, including the Georgia Academy of Science Annual Meeting, the American Society of Microbiology Microbe 2024 Conference, the Southeast Undergraduate Research Conference, and the National Conference on Undergraduate Research. These experiences significantly enhanced my communication and leadership skills and augmented my appreciation for scientific collaboration and learning.

In addition to research and education, GSGC facilitated experiential learning opportunities, such as a visit to the CDC Museum, which broadened my understanding of public health communication. GSGC also encouraged me to become certified in phlebotomy through KSU and the National Healthcare Association, preparing me for clinical experiences essential for medical school.

As I prepare to graduate summa cum laude from Kennesaw State University, I am deeply honored to have been selected as the Fall 2025 recipient of the President's Award of Distinction, which recognizes academic excellence, leadership, and research contributions made possible through GSGC funding. The Georgia Space Grant Consortium has been instrumental in shaping my growth as a scholar, mentor, and future physician, inspiring me to pursue medical school while remaining committed to scientific innovation and compassionate care.

Real World Learning and Workforce Development

Hands-On Observing and Research Program

Coca-Cola Space Science Center, Columbus State student working in the CCSCC Observatory

photo courtesy of Columbus State University

photo courtesy of the Georgia Tech Experimental Rocketry Team

GTXR Preparations for Launch

Members of the GTXR team fitting the rocket booster in prepatarion for launch.

TryEngineering Summer Program

Georgia High School students preparing for their test launch of their water craft during the TryEngineering Summer Program.

photo courtesy of the Georgia Space Grant Consortium

2024 - 2025 Georgia Tech Experimental Rocketry Team

This past year for Georgia Tech Experimental Rocketry (GTXR), a project team of the Ramblin' Rocket Club (RRC) at Georgia Tech, was transformative with significant technical milestones and a major organizational expansion. GTXR achieved record-breaking recruitment, welcoming a diverse cohort of new members from a wide array of majors. To support this growth, we overhauled our onboarding process, ensuring students from all backgrounds could rapidly contribute to our specialized subteams. Beyond our campus, we significantly scaled our high school internship program and broadened our outreach, engaging with more schools across the Greater Atlanta area than ever before.

The goal of the 2024-2025 year was to develop GTXR's first 8" booster with a 6" sustainer architecture rocket, Live and Let Fly, to test our ability to control all flight events with a custom in-house flight computer, develop structures to handle intense supersonic flight, successfully ignite our second stage at high altitude, explore spin stabilization as a solution to roll coupling, and accurately simulate flight conditions. However, before we could fully dedicate our efforts to Live and Let Fly, we had to launch Strange Magic, a rocket built in 2023-2024 to test GTXR's first custom flight computer. After two months of modifications and planning, Strange Magic successfully launched on October 5th at South East Alabama Rocket Society (SEARS) in Samson, AL, reaching an apogee of around 5000 ft.

In the meantime, we continued iterating on the design of Live and Let Fly, developing a new passive staging system, designing a new flight computer enclosure, advancing Strange Magic's flight computer, expanding our analysis and manufacturing abilities to simulate and create spin stabilized aerostructures, and optimizing our booster and sustainer motor performance. After two semesters of nonstop work, Live and Let Fly, spanning 17.6 ft and weighing 290 lbs, was ready for launch in July at Friends of Amateur Rocketry in the Mojave Desert. On July 10th, 65 members from the team travelled from around the world to Mojave, CA to participate in thlaunch of Live and Let Fly. As the weekend progressed, we faced various mission-critical challenges such as pivoting to our backup commercial-off-the-shelf KATE flight computer and replacing the passthrough for our sustainer motor ignition system. Thanks to the incredible determination, dedication, teamwork, and grit of the members of this club, we were able to push forward and make this launch happen.

We successfully launched Live and Let Fly on July 13th at 15:48 PST. While Live and Let Fly encountered some issues during flight with booster recovery and our sustainer motor, the mission achieved several landmark successes. For the first time, we successfully ignited a second stage at altitude and validated our novel passive cone staging system. Additionally, the flight confirmed that spin stabilization effectively reduced roll coupling and proved the structural integrity of our aerostructures under intense flight loads. The data gathered from this launch has been invaluable, directly informing the design and mission profile of our 2025-2026 vehicle, Mach 'N' Roll.

Throughout the past year, we wouldn't have been able to develop our rocket, grow our club and achieve our goals without the continued support of the Daniel Guggenheim School of Aerospace Engineering, the Georgia Space Grant Consortium, and all our additional supporters. We are incredibly grateful and looking forward to continuing and growing our partnership.

GSGC Georgia Industry and NASA Internships

DonovanWilliams
Aubrey Silvey
Summer 2025

Jose Mendez
Tyden Brooks
Summer 2025

Andrew Simonenko
Tyden Brooks
Summer 2025

Kiran Holton
SpaceWorks Enterprises
Fall 2024

Abhinav Vishnuvajhala
SpaceWorks Enterprises
Summer 2025

Mansi Patel
SpaceWorks Enterprises
Summer 2025

Aman Khemkal
Georgia Institute of Technology
Glenn Research Center, Fall 2024

Kristen Zach
University of Georgia
Stennis Space Center, Spring 2025

Kristen Zach
University of Georgia
Stennis Space Center, Summer 2025

Hebah Fedah
Georgia Institute of Technology
Ames Research Center, Summer 2025

Richard Yang
Georgia Institute of Technology
Marshall Space Flight Center, Summer 2025

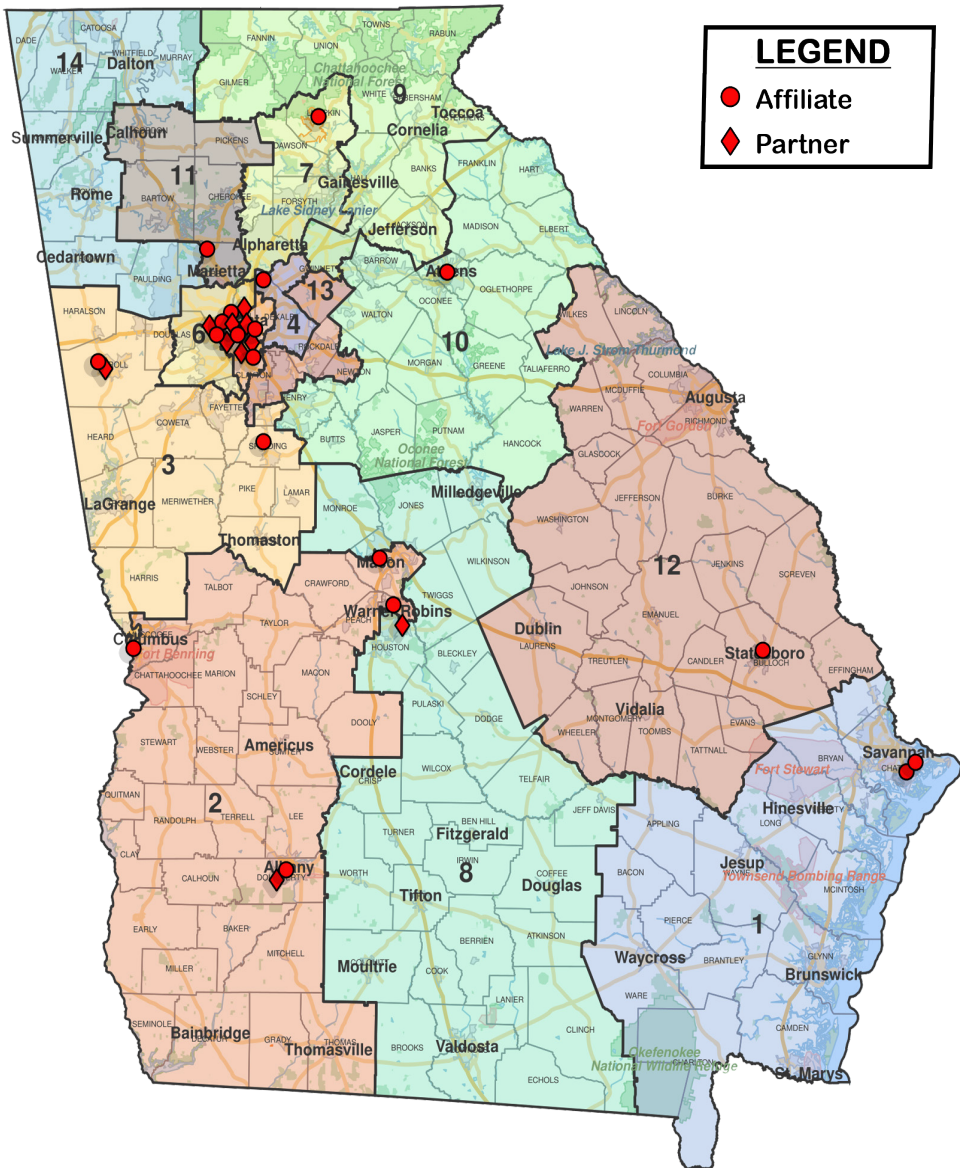
Alan Yeung
Georgia Institute of Technology
Jet Propulsion Lab, Summer 2025

Karthik Chilakapati
Georgia Insitiute of Technology
Stennis Space Center, Summer 2025

Ashley Burton
Georgia Institute of Technology
Marshall Space Flight Center, Summer 2025

BY THE NETWORK

GSGC has a large network of Affiliates and Partners serving Georgia Residents across the state.



Strengthening Georgia's STEM education to build a high-quality workforce

Georgia Space Grant Consortium
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